

**Abstract**

Sensor arrangement for use in the seismic investigation of geological formations below the seabed, with a plurality of sensor nodes (20), which are arranged for deployment on the seabed to collect pressure waves and shear waves from the geological formations, and to transfer seismic data to a surface receiver. Each sensor node (20) comprises a mainly cylindrical structure (22), which is intended to penetrate down into the seabed. A geophone (30-32) is arranged in connection with this structure (22). An advantageous method for operating a seismic mapping system with sensor arrangements orderly deployed on the seabed, records data concerning system behaviour and seismic data, the data of which is to be further processed separately.

Fig. 2